Safety Data Sheet

Section 1: Identification of the substance/mixture and of the company/undertaking

Product Name: Strive SR

Chemical Name: Enzyme preparation

Declared Activity: Glucoamylase (glucan 1,4-alpha-glucosidase)

Recommended Use: Enzyme preparations are biocatalysts used in a variety of industrial processes and in certain consumer products.

Company Identification: CTE Global, Inc.
630 Dundee Road, Suite 440
Northbrook, IL 60062

Emergency Telephone Number: 847-564-5770

Section 2: Hazards identification

Classification: Classification of the chemical in accordance with 29CFR §1910.1200

Respiratory sensitization	Category 1

Label elements

GHS-US Labeling

Hazard Pictograms (GHS-US):

GHS08

Signal Word (GHS-US): Danger

Hazard Statements
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements – Prevention

P261 – Avoid breathing dust/fumes/gas/mist/vapors/spray

P284 – In case of inadequate ventilation wear respiratory protection

Precautionary Statements – Response

P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician

Section 3: Composition/information on ingredients

Chemical Name	CAS-No	IUB No.	Weight %
Glucoamylase (glucan 1,4-alpha-glucosidase)	9032-08-0	3.2.1.3	20-30

aep (active enzyme protein) contributes to the GHS classification.

Section 4: First Aid Measures

In case of unintended overexposure, the following measures apply

Inhalation

Effects May cause allergic respiratory reaction.

Symptoms Shortness of breath, wheezing and coughing.
The effects of inhalation may be delayed.

First Aid Remove person to fresh air. If signs/symptoms continue, get medical attention.
Show this safety data sheet to the doctor in attendance.

Skin Contact

Effects May cause slight irritation.

Symptoms Slight irritation.

First Aid Remove and wash contaminated clothing before re-use. Wash off immediately with plenty of water. If symptoms persist, call a doctor. Show this safety data sheet to the doctor in attendance.

Eye Contact

Effects May cause slight irritation.

Symptoms Slight irritation.

First Aid Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first five minutes, then continue rinsing eye. If symptoms persist, call a doctor. Show this safety data sheet to the doctor in attendance.

Ingestion

Effects Ingestion may cause gastrointestinal irritation, nausea,

	vomiting, and diarrhea.
Symptoms	Irritation.
First Aid	Rinse mouth with water and drink plenty of water. If symptoms persist, call a doctor. Show this safety data sheet to the doctor in attendance.

Section 5: Firefighting measures

Flammable Properties	Slightly flammable according to HMIS criteria.
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	None
Hazardous Combustion Products	None
Specific Hazard Arising from the Chemical	May cause allergic respiratory reaction.
Protective Equipment and Precautions for Firefighters	Self-contaminated breathing apparatus and standard standard turn-out apparel.

Section 6: Accidental Release Measures

Personal Precautions	For personal protection see section 8.
Environmental Precautions	Collect spillage.
Methods for Cleaning Up	Avoid formation of dust and aerosols. Spilled preparation should be removed immediately to avoid formation of dust from dried preparation. Take up by mechanical means preferably by a vacuum cleaner equipped with a HEPA (High Efficiency Particulate Air) filter. Flush remainder carefully with plenty of water. Avoid splashing, high pressure washing or compressed air cleaning to avoid formation of aerosols. Ensure sufficient ventilation. Wash contaminated clothing.
Other Information:	For personal protection see section 8.

Section 7: Handling and storage

Handling	Avoid formation of dust and aerosols.

	Ensure adequate ventilation. Liquid enzyme preparations are dust free preparations. However, inappropriate handling may cause formation of dust or aerosols.
Storage	Keep tightly closed in a dry and cool place Temperature 0-25°C (32-77°F)
Storage Conditions	In unbroken packaging – dry and protect from the sun. The product has been formulated for optimal stability. Extended storage or adverse conditions such as higher temperatures or higher humidity may lead to a higher dosage requirement.

Section 8: Exposure controls/personal protection

Chemical Name	DNEL Dermal Acute Local	DMEL Inhalation Long term Local
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)		DMEL = 60 ng/m³

Derived No Effect Level (DNEL)
Derived Minimal Effect Level (DMEL)

Occupational Exposure Controls

Engineering Controls	Ensure adequate ventilation, especially in confined areas. Maintain good conditions of industrial hygiene. Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and healthy/safety information is available upon request.

Personal Protective Equipment

Respiratory Protection	In case of insufficient ventilation wear suitable respiratory equipment that meets HEPA/P100 specifications.
Eye Protection	Wear safety glasses with side-shields (or goggles).
Skin and Body Protection	No special technical protective measures are necessary.
General Hygiene Consideration	Handle in accordance with good industrial hygiene and safety practices.
Environmental Exposure Controls	Local authorities should be advised if significant spillages cannot be contained.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State:	Liquid
Color:	Light to dark brown
Odor:	Slightly fermentation odor
pH:	4.0-9.0
Melting/Freezing Point:	No information available
Boiling Point:	Not determined
Flash Point:	Not determined
Evaporation Rate:	Not available
Flammability (solid, gas)	Not determined
Upper/Lower Flammability:	Not available
Vapor Pressure:	No data available
Vapor Density:	Not available
Density (g/ml):	1.11-1.16 g/ml
Solubility:	Active components is readily soluble in application-relevant solutions at all levels of concentration, temperature and pH which may occur in normal usage.
Partition Coefficient:	No data available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Viscosity:	Not available
Other Information:	No information available

Section 10: Stability and Reactivity

Reactivity	Not relevant
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to Avoid	None
Incompatible Materials	None
Hazardous Decomposition Products	None

Section 11: Toxicological Information

Information on toxicological effects

Repeated inhalation of enzyme dust or aerosols resulting from improper handling may induce sensitization and may cause allergic type 1 reactions in sensitized individuals.

Mild skin irritation.

Mild eye irritation.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical name	Acute oral toxicity	Acute inhalation toxicity	Skin corrosion/irritation	Serious eye damage/eye
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	LD50: > 2000 mg/kg bw (OECD TG 401, 420)		Not irritating (OECD TG 404)	Not irritating (OECD TG 405)

Chemical name	Specific target organ toxicity (single exposure)	Genetic toxicity	Skin sensitization	Respiratory sensitization
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)		No indication of mutagenic effects (OECD TG 471, 476, 487)		Sensitizer (Human experience)

Section 12: Ecological Information

Toxicity

Chemical name	Daphnia, acute	Algae, acute	Fish, acute
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	EC50 (48 hours): 31.7 - 457 mg aep/l (OECD TG 202)	ErC50 (72 hours): >= 5.2 mg aep/l (OECD TG 201)	LC50 (96 hours): 58.3 - 326.7 mg aep/l (OECD TG 203)

Persistence/Degradability

Chemical name	Persistence and degradability	Partition
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	Readily biodegradable (OECD 301)	LogPow: <0

Chemical name	Bioaccumulative Potential
Glucoamylase (glucan 1,4-alpha-glucosidase) (aep)	Does not bioaccumulate

Mobility in Soil: Not relevant

Other Adverse Effects No Information available

Section 13: Disposal Considerations

Disposal of Wastes Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of wastes in an approved waste disposal facility.

Section 14: Transport Information

Transport Regulations

No dangerous goods according to transport regulations.
No special precautions required.

Transport Hazard Class(es) Not applicable

Packing Group Not applicable

Environmental Hazards Not applicable

Section 15: Regulatory Information

USA, Federal Regulations

TSCA Inventory The active ingredient and all components of the enzyme preparation are listed on the TSCA inventory.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemical which are subject to the reporting requirements of the ACT and 40 CFR Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

USA, State Regulations

California Proposition 65	This product does not contain any Proposition 65 chemicals.
Canada	
WHMIS Hazard Class	Controlled product hazard class D2 A (respiratory sensitizer)
WHMIS Statement	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR

Section 16: Other Information

Indication of changes:	05/28/2019
GHS-Classification	The GHS calculation method has been used for classification of this mixture.
Disclaimer	The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Furthermore, as the conditions of use are beyond the control of CTE Global, Inc., it is the responsibility of the customer to determine the conditions of safe use of these products.